ABSTRACT

A three-phase brushless motor includes a rotor with a permanent magnet having P (P is an integer not less than two) pieces of polarity and a stator facing the rotor and having plural coils shaped in approx. triangle or trapezoid. A space between adjacent coils is $(360/P) \times (5/3)$ degree. Three position-detectors, which detect the position of the rotor, is placed at intervals of $(360/P) \times (2/3)$ degree in an area where no coils are placed. This structure allows the coils to be optimally shaped and placed, and realizes to reduce a number of coils as well as improve the motor characteristics.